

II. AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application. Fees in the amount of \$2700.00 are included for the additional claims as follows:

Added claims:	30 @ \$50.00 =	\$1500.00
Added Independent Claims:	8	
Total Independent Claims:	9	
Independent claims in excess of 3:	6 @ \$200.00 = \$	1200.00
Total Fee paid:		\$2700.00

Listing of Claims:

1. (Original): A method of automated sample processing comprising the steps of:
establishing a first stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through first robotic sample process functions;
establishing at least a second stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through second robotic sample process functions;
establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system; and
automatically processing at least one sample through operation of said first robotic sample process functions; and
automatically processing at least one sample through operation of said second robotic sample process functions.
2. (Original): A method of automated sample processing as described in claim 2 wherein said step of establishing an isolated electrical connection among said first

stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of utilizing an intermediate computer functionality.

3. (Original): A method of automated sample processing as described in claim 2 wherein said step of automatically processing at least one sample through operation of said first robotic sample process functions comprises the step of responding to said intermediate computer functionality, and wherein said step of automatically processing at least one sample through operation of said second robotic sample process functions comprises the step of responding to said intermediate computer functionality.
4. (Original): A method of automated sample processing as described in claim 3 wherein said step of automatically processing at least one sample through operation of said first robotic sample process functions comprises the step of repetitively responding to said intermediate computer functionality, and wherein said step of automatically processing at least one sample through operation of said second robotic sample process functions comprises the step of repetitively responding to said intermediate computer functionality.
5. (Original): A method of automated sample processing as described in claim 2 wherein said step of utilizing an intermediate computer functionality comprises the step of utilizing a separate full function computer programmed for operation with an automated slide processing system.
6. (Original): A method of automated sample processing as described in claim 5 wherein said step of utilizing an intermediate computer functionality comprises the step of utilizing a server functionality.
7. (Previously presented): A method of automated sample processing as described in claim 1 and further comprising the step of interacting between said

first stand alone automated sample processing system and said second stand alone automated sample processing system.

8. (Original): A method of automated sample processing as described in claim 7 wherein said step of interacting between said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of communicating processing data between said first stand alone automated sample processing system and said second stand alone automated sample processing system.
9. (Original): A method of automated sample processing as described in claim 1 wherein said step of establishing a first stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through first robotic sample process functions comprises the step of establishing a first automated slide processing system, and wherein said step of establishing at least a second stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through second robotic sample process functions comprises the step of establishing a second automated slide processing system.
10. (Original): A method of automated sample processing as described in claim 9 wherein said step of automatically processing at least one sample through operation of said first robotic sample process functions comprises the steps of:
arranging a plurality of slides on a carrier retainment assembly;
applying a reagent to said plurality of slides; and
automatically staining said plurality of slides,

and wherein said step of automatically processing at least one sample through operation of said second robotic sample process functions comprises the steps of:

arranging a plurality of slides on a carrier retainment assembly;
applying a reagent to said plurality of slides; and
automatically staining said plurality of slides.

11. (Original): A method of automated sample processing as described in claim 10 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of utilizing an intermediate computer functionality.
12. (Original): A method of automated sample processing as described in claim 11 wherein said step of utilizing an intermediate computer functionality comprises the step of utilizing a separate full function computer programmed for operation with an automated slide processing system.
13. (Original): A method of automated sample processing as described in claim 12 wherein said step of utilizing an intermediate computer functionality comprises the step of utilizing a server functionality.
14. (Original): A method of automated sample processing as described in claim 13 and further comprising the step of establishing a plurality of client functionalities connected to said isolated electrical connection.
15. (Previously presented): A method of automated sample processing as described in claim 1 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a scalable connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system.

16. (Original): A method of automated sample processing as described in claim 15 wherein said step of establishing a scalable connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing an address-based connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system.
17. (Previously presented): A method of automated sample processing as described in claim 1 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the steps of:
- prompting address-based electronic communications programming on a separate full function computer electrically connected to said first stand alone automated sample processing system and said second stand alone automated sample processing system to request specific activity on said first stand alone automated sample processing system;
 - transferring said request for specific activity to said first stand alone automated sample processing system across said isolated electrical connection;
 - conducting activity on said first stand alone automated sample processing system as a result of said step of prompting electronic communications programming on a separate full function computer;
 - prompting address-based electronic communications programming on said first stand alone automated sample processing system to respond to said request for specific activity from said separate full function computer; and
 - transferring said response to said request for specific activity to said first stand alone automated sample processing system across said isolated electrical connection.
18. (Original): A method of automated sample processing as described in claim 17 wherein said step of establishing an isolated electrical connection among said first

stand alone automated sample processing system and said second stand alone automated sample processing system further comprises the step of establishing a local area network.

19. (Original): A method of automated sample processing as described in claim 18 wherein said step of establishing a local area network electronically comprises the step of incorporating a system having a feature selected from a group consisting of:
an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, and a layered protocol exchange system.
20. (Previously presented): A method of automated sample processing as described in claim 1 and further comprising the step of storing historical information.
21. (Original): A method of automated sample processing as described in claim 20 wherein said step of storing historical information comprises the steps of:
storing historical information relative to said first stand alone automated sample processing system on said first stand alone automated sample processing system;
and
storing historical information relative to said second stand alone automated sample processing system on said second stand alone automated sample processing system.
22. (Original): A method of automated sample processing as described in claim 21 and further comprising the step of transferring at least part of said historical information to a separate electronic location.

23. (Original): A method of automated sample processing as described in claim 22 wherein said step of transferring at least part of said historical information to a separate electronic location comprises the step of automatically transferring at least part of said historical information to a separate electronic location when said separate electronic location is available.
24. (Previously presented): A method of automated sample processing as described in claim 1 wherein said step of establishing a first stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through first robotic sample process functions comprises the step of establishing an array of multiple memory elements for said first stand alone automated sample processing system, and wherein said step of establishing at least a second stand alone automated sample processing system having an automated process operation capability that causes automated process operation events through second robotic sample process functions comprises the step of establishing an array of multiple memory elements for said second stand alone automated sample processing system.
25. (Original): A method of automated sample processing as described in claim 24 wherein said step of establishing an array of multiple memory elements for said first stand alone automated sample processing system comprises the step of establishing a mirrored array of multiple memory elements for said first stand alone automated sample processing system, and wherein said step of establishing an array of multiple memory elements for said second stand alone automated sample processing system comprises the step of establishing a mirrored array of multiple memory elements for said second stand alone automated sample processing system.
26. (Previously presented): A method of automated sample processing as described in claim 1 wherein said step of automatically processing at least one

sample through operation of said first robotic sample process functions comprises the steps of:

interrupting processing through operation of said first robotic sample process functions; and

resuming processing through operation of said first robotic sample process functions,

and wherein said step of automatically processing at least one sample through operation of said second robotic sample process functions comprises the steps of:

interrupting processing through operation of said second robotic sample process functions; and

resuming processing through operation of said second robotic sample process functions.

27. (Original): A method of automated sample processing as described in claim 26 and further comprising the steps of:
changing at least one aspect of sample processing; and
rescheduling robotic sample process functions in response to said step of changing at least one aspect of sample processing.
28. (Original): A method of automated sample processing as described in claim 26 and further comprising the step of applying additional buffer to at least one sample in response to said step of changing at least one aspect of sample processing.
29. (Previously presented): A method of automated sample processing as described in claim 1 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a physically separate system connection.

30. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing an Internet connection.
31. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing an Ethernet connection.
32. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a telephone connection.
33. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a connection to a separate room.
34. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a wireless connection.

35. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a bluetooth-based connection.
36. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing an e-mail based connection.
37. (Original): A method of automated sample processing as described in claim 29 wherein said step of establishing an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system comprises the step of establishing a hardwired connection.
38. (Previously presented): A method of automated sample processing as described in claim 1 and further comprising the step of connecting said isolated electrical connection to an external network.
39. (Original): A method of automated sample processing as described in claim 38 and further comprising the step of establishing an isolation functionality between said isolated electrical connection and said external network.
40. (Original): A method of automated sample processing as described in claim 38 wherein said step of connecting said isolated electrical connection to an external network comprises the step of connecting said isolated electrical connection to an office network.

41. (Previously presented): A method of automated sample processing as described in claim 38 wherein said step of connecting said isolated electrical connection to an external network comprises the step of connecting said isolated electrical connection to a laboratory information system.
- 42 – 223. (Cancelled)
224. (New): A laboratory instrument information management and control apparatus, comprising:
a Laboratory Information System (LIS) configured to manage patient and laboratory information;
at least one laboratory instrument configured to run anatomical pathology tests relating to at least one patient;
at least one host computer in communication with said at least one laboratory instrument;
an interface point server (IPS) in communication with said host computer and said LIS, said interface point server configured to function as a communication interface between said host computer and said hospital laboratory information system in a manner responsive to a predetermined communication protocol, and said IPS comprising a first level interface for data communication and control between said LIS and said IPS, and said IPS comprising a second level interface for data communication and control between said at least one laboratory instrument and said IPS.
225. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said at least one laboratory instrument comprises at least two automated slide staining systems, and said second level interface of said IPS controls data communication and control between said at least two automated slide staining systems and said IPS, and said second level interface of said IPS controls data communication and control among said at least two automated slide staining systems.

226. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said at least one laboratory instrument configured to run tests relating to at least one patient includes said at least one host computer in communication with said at least one laboratory instrument as an integral part of said at least one laboratory instrument.
227. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said predetermined communication protocol governs data exchange, data management and integration of data in accordance with one of Health Level Seven (HL7) protocol, or IEEE 1073 standard for Medical Device Communications.
228. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said at least one host computer is in communication with said at least one laboratory instrument via at least one of a wireless connection, a serial connection, a parallel connection and an Ethernet connection.
229. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said hospital laboratory information system is in communication with the interface point server via at least one of an Ethernet connection and an Internet connection.
230. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said at least one laboratory instrument comprises at least two automated slide staining systems, and said second level interface controls data sharing among said at least two automated slide staining systems.
231. (New): The laboratory instrument information management and control apparatus of claim 230 wherein said data sharing among said at least two

automated slide staining systems includes data comprising staining protocols; user passwords and privileges; reagent dispensers; reagent vials; cases; keycodes; templates; panels; and 3rd party reagents.

232. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said laboratory information system manages the workflow for anatomical pathology in a laboratory, including at least one of pathology order placement; slide processing optimization on multiple instruments; slide identification through the process; bar code use; reagent use and supply; reagent sharing between laboratory instruments; and operator in-service qualification.
233. (New): The laboratory instrument information management and control apparatus of claim 224 wherein said laboratory information system is a hospital laboratory information system.
234. (New) A method for communication between a laboratory information system and at least one host computer comprising the steps of:
configuring an interface point network including an interface point server (IPS) in communication with a laboratory information system and at least one host computer managing data and control for at least one anatomical pathology laboratory instrument, said at least one host computer including host data and being in communication with said at least one laboratory instrument;
operating said interface point server to broadcast a message across said interface point network, wherein said message includes information responsive to data present on said IPS;
determining if differences exist between said host data and said data present on said IPS; and
updating at least one of said IPS and said at least one host computer in a manner responsive to at least one of said host data and said data present on said IPS.

235. (New) The method of claim 234 wherein said at least one host computer comprises more than one host computer and the method further includes the step of sharing of data among said more than one host computer.
236. (New) The method of claim 235 wherein said sharing of data among said more than one host computer includes data comprising staining protocols; user passwords and privileges; reagent dispensers; reagent vials; cases; keycodes; templates; panels; and 3rd party reagents.
237. (New) The method of claim 234 wherein said laboratory information system manages the workflow for anatomical pathology in a laboratory, including at least one of pathology order placement; slide processing optimization on multiple instruments; slide identification through the process; bar code use; reagent use and supply; reagent sharing between laboratory instruments; and operator in-service qualification.
238. (New) The method of claim 234 wherein said at least one host computer managing data and control for at least one anatomical pathology laboratory instrument is an integral part of said at least one laboratory instrument
239. (New) The method of claim 234 wherein said interface point server (IPS) in communication with said laboratory information system communicates via a predetermined communication protocol that governs data exchange, data management and integration of data in accordance with one of Health Level Seven (HL7) protocol, or IEEE 1073 standard for Medical Device Communications.
240. (New) A method for laboratory instrument information management and control, comprising the steps of:
configuring a Laboratory Information System (LIS) to manage patient and laboratory information in accordance with Health Level Seven protocol;

configuring at least two automated slide staining laboratory instruments to run anatomical pathology tests relating to at least one patient;
configuring at least one host computer in communication with said at least two slide staining laboratory instruments;
configuring a server in communication with said at least one host computer and said LIS, said server comprising a first level interface for data communication and control between said LIS and said server, and said server comprising a second level interface for data communication and control between said at least two automated slide staining laboratory instruments and said server, wherein said server is further configured for data sharing among said at least one host computer and said at least two automated slide staining laboratory instruments.

241. (New) The method for laboratory instrument information management and control of claim 240 wherein said data sharing among said at least two automated slide staining laboratory instruments includes data comprising staining protocols; user passwords and privileges; reagent dispensers; reagent vials; cases; keycodes; templates; panels; and 3rd party reagents.
242. (New) The method for laboratory instrument information management and control of claim 240 wherein said laboratory information system manages the workflow for anatomical pathology in a laboratory, including at least one of pathology order placement; slide processing optimization on multiple instruments; slide identification through the process; bar code use; reagent use and supply; reagent sharing between laboratory instruments; and operator in-service qualification.
243. (New) The method of claim 240 wherein said server in communication with said laboratory information system communicates via a predetermined communication protocol that governs data exchange, data management and integration of data in accordance with one of Health Level Seven (HL7) protocol, or IEEE 1073 standard for Medical Device Communications.

244. (New): An automated sample processing system comprising:
- a. a first sample;
 - b. a first stand alone automated slide processing system having a first robotic motion system to which said first sample is responsive;
 - c. a second sample;
 - d. a second stand alone automated slide processing system having a second robotic motion system to which said second sample is responsive;
 - e. an isolated electrical connection among said first stand alone automated sample processing system and said second stand alone automated sample processing system;
 - f. a first automated process functionality to which said first robotic motion system is responsive; and
 - g. a second automated process functionality to which said second robotic motion system is responsive.
245. (New): An automated sample processing system as described in claim 244 wherein said isolated electrical connection comprises a system having a feature selected from a group consisting of:
- an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, a layered protocol exchange system, an intermediate computer functionality, a separate full function computer programmed for operation with an automated slide processing system, a server functionality, a processing system interaction functionality, a processing data communication functionality between said first stand alone automated sample processing system and said second stand alone automated sample processing system, a scalable connection, an address-based connection, an address-based electronic communications prompt functionality on a separate full function

computer electrically connected to said first stand alone automated sample processing system and said second stand alone automated sample processing system, a request transfer functionality to which said first stand alone automated sample processing system is responsive, an address-based electronic communications prompt functionality on said first stand alone automated sample processing system, a response transfer functionality to which a separate full function computer is responsive, a local area network, and a local area network electronically connected to an automated sample processing system.

246. (New): A method of automated sample processing comprising the steps of:
establishing an automated sample processing system having an automated process operation capability that causes automated process operation events through robotic sample process functions;
transiently activating a remote information link with said automated sample processing system;
transferring sample process information through said remote information link; and
automatically processing at least one sample through operation of said robotic sample process functions.
247. (New): A method of automated sample processing as described in claim 246 wherein said step of transiently activating a remote information link comprises the step of incorporating a system having a feature selected from a group consisting of:
an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, a layered protocol exchange system, an intermediate computer functionality, a separate full function computer programmed for operation with an automated slide processing system, a server functionality, a processing system interaction functionality, a processing data

communication functionality between a first stand alone automated sample processing system and a second stand alone automated sample processing system, a scalable connection, an address-based connection, an address-based electronic communications prompt functionality on a separate full function computer electrically connected to a first stand alone automated sample processing system and a second stand alone automated sample processing system, a request transfer functionality to which a first stand alone automated sample processing system is responsive, an address-based electronic communications prompt functionality on a first stand alone automated sample processing system, a response transfer functionality to which a separate full function computer is responsive, a local area network, and a local area network electronically connected to an automated sample processing system..

248. (New): An automated sample processing system comprising:
at least one sample;
an automated slide processing system having a robotic motion system to which said first sample is responsive;
a transiently active remote information link with said automated sample processing system; and
an automated process functionality to which said robotic motion system is responsive.
249. (New): An automated sample processing system as described in claim 248 wherein said transiently active remote information link comprises a system having a feature selected from a group consisting of:
an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, a layered protocol exchange system, an intermediate computer functionality, a separate full function computer

programmed for operation with an automated slide processing system, a server functionality, a processing system interaction functionality, a processing data communication functionality between a first stand alone automated sample processing system and a second stand alone automated sample processing system, a scalable connection, an address-based connection, an address-based electronic communications prompt functionality on a separate full function computer electrically connected to a first stand alone automated sample processing system and a second stand alone automated sample processing system, a request transfer functionality to which a first stand alone automated sample processing system is responsive, an address-based electronic communications prompt functionality on a first stand alone automated sample processing system, a response transfer functionality to which a separate full function computer is responsive, a local area network, and a local area network electronically connected to an automated sample processing system.

250. (New): A method of automated sample processing comprising the steps of:
establishing an automated sample processing system having an automated process operation capability that causes automated process operation events through robotic sample process functions;
activating a continuous physically remote information link with said automated sample processing system;
continuously transferring sample process information through said continuous physically remote information link; and
automatically processing at least one sample through operation of said robotic sample process functions in response to said continuously transfer of sample process information.
251. (New): A method of automated sample processing as described in claim 250 wherein said step of activating a continuous physically remote information link comprises the step of incorporating a system having a feature selected from a group consisting of:

an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, a layered protocol exchange system, an intermediate computer functionality, a separate full function computer programmed for operation with an automated slide processing system, a server functionality, a processing system interaction functionality, a processing data communication functionality between a first stand alone automated sample processing system and a second stand alone automated sample processing system, a scalable connection, an address-based connection, an address-based electronic communications prompt functionality on a separate full function computer electrically connected to a first stand alone automated sample processing system and a second stand alone automated sample processing system, a request transfer functionality to which a first stand alone automated sample processing system is responsive, an address-based electronic communications prompt functionality on a first stand alone automated sample processing system, a response transfer functionality to which a separate full function computer is responsive, a local area network, and a local area network electronically connected to an automated sample processing system..

252. (New): An automated sample processing system comprising:
at least one sample;
an automated sample processing system having a robotic motion system to which said sample is responsive;
a continuous physically remote information link to which said automated sample processing system is responsive; and
an automated process functionality to which said robotic motion system is responsive.

253. (New): An automated sample processing system as described in claim 252 wherein said continuous physically remote information link comprises a system having a feature selected from a group consisting of:
- an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, a layered protocol exchange system, an intermediate computer functionality, a separate full function computer programmed for operation with an automated slide processing system, a server functionality, a processing system interaction functionality, a processing data communication functionality between a first stand alone automated sample processing system and a second stand alone automated sample processing system, a scalable connection, an address-based connection, an address-based electronic communications prompt functionality on a separate full function computer electrically connected to a first stand alone automated sample processing system and a second stand alone automated sample processing system, a request transfer functionality to which a first stand alone automated sample processing system is responsive, an address-based electronic communications prompt functionality on a first stand alone automated sample processing system, a response transfer functionality to which a separate full function computer is responsive, a local area network, and a local area network electronically connected to an automated sample processing system.